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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,278	09/19/2003	Hideo Morimoto	07700.042001	5463

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09/12/2005

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EXAMINER

DAVIS, OCTAVIA L

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,278

Applicant(s)

MORIMOTO, HIDEO

Examiner

Octavia Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/17/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7 and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors because it contains more than 20 pages. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2, 4, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Young.

Regarding claims 2 and 4, Young discloses a method and apparatus for a touch sensing device having a thin film insulation layer about the periphery of each sensing element comprising a plurality of sensors 10 arranged in a matrix, an elastic supporting member 16 configured to partition at least two of the plurality of sensors from each other (See Col. 6, lines 24 – 37), a cover layer 28 configured to cover the plurality of sensors wherein at least one of the plurality of sensors comprises a plurality of first electrodes 12 corresponding to a plurality of directions, respectively, and a second electrode 15 supported by the elastic supporting member 16 and facing the plurality of first electrodes such that capacitance elements are formed by the plurality of first electrodes and the second electrode (See Col. 7, lines 8 – 20 and Col. 11, lines 4 – 11, See Fig. 3), wherein the second

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electrode 15 is configured to be displaceable toward the plurality of first electrodes when an external force is applied thereto, the sensors identify the external force in a multidimensional direction on the basis of detection of changes in capacitance of the capacitance elements caused by changes in distances between the plurality of first electrodes and the second electrode and a pressure sensitive resistive member 30 is arranged between the plurality of electrodes (See Col. 9, lines 2 – 11 and 58 – 63).

Regarding claims 13 – 15, a surface of the cover layer 28 not subjected to a force includes no projections and depressions (See Fig. 3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young and Machida et al.

Regarding claim 3, Young discloses all of the limitations of these claims except for teachings that the sensors further comprise a third electrode grounded and arranged in a proximity of the first electrodes. However, Machida et al disclose a capacitance type pressure sensor comprising sensor electrodes 1205 and ground electrodes 1206 arranged in a matrix pattern and a signal input to the plurality of first electrodes when a second electrode of the sensor electrodes 1205 and the ground electrodes are in contact with each other (See Col. 25, lines 10 – 47 and 49 - 64).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Young according to the teachings of Machida et al for the purpose of, applying a pressure means to a ground electrode to generate static electricity on a surface a sensor (See Machida et al, Col. 24, lines 18 – 26).

Regarding claim 17, in Young, an insulating layer 30 covers the plurality of the first electrodes 12 (See Col. 9, lines 1 – 8, See Fig. 5).

Regarding claim 18, in Young, the change in capacitance is detected using the signal that is input to the plurality of first electrodes 12 when the second electrode 15 contacts the third electrode (See Col. 7, lines 8 – 20).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young and Machida et al, as applied to claims 2 – 4 and 13 – 18 above, and further in view of Onose et al.

Regarding claims 5 – 7, Young and Machida et al disclose all of the limitations of these claims except for a teaching that a plurality of sensors further comprises a core member disposed between the cover layer and the second electrode and formed of a rigid material to cause the second electrode to be displaced by the force applied. However, Onose et al disclose a capacitance-type

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pressure sensor comprising a rigid core member 9 disposed between a cover layer 20 and a second electrode 6 (See Col. 3, lines 43 - 51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Young according to the teachings of Onose et al for the purpose of, providing a dual deposit film and a diaphragm film over a cavity region to vacuum-seal the cavity region (See Onose et al, Col. 5, lines 16 – 22).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

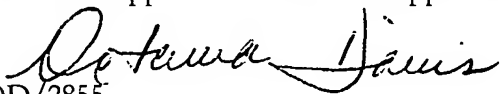
Manaresi et al (6,826,968) disclose a textile-like capacitive pressure sensor and method of mapping the pressure exerted at points of a surface of a flexible and pliable object.

Morimura et al (6,714,666) disclose a surface shape recognition apparatus.

Sato et al (6,727,561) disclose a surface shape recognition sensor and method of manufacturing the same.

9. Any inquiry concerning this communication should be directed to Examiner Octavia Davis at telephone number (571) 272 - 2176. The examiner can normally be reached on Monday - Thursdays (9:00 - 5:00), Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (571) 272 - 2180. The fax phone number for the organization where this application where this application or proceeding is assigned is (703) 872 - 9306.


OD/2855
8/19/05